

Yw



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,949	01/27/2004	Yu-Chieh Lin	PMXP0171USA	1948

27765 7590 05/19/2005

NORTH AMERICA INTERNATIONAL PATENT OFFICE (NAIPC)
P.O. BOX 506
MERRIFIELD, VA 22116

EXAMINER

QUIETT, CARRAMAH J

ART UNIT	PAPER NUMBER
2612	

2612

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of **claims 1-3, 7-8, 12-18 and 20-22** in the reply filed on **12/24/2004** is acknowledged.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statement (IDS), filed on **01/28/2005**, has been placed in the application file, and the information referred to therein has been considered as to the merits.

Claim Objections

4. **Claim 7** is objected to because of the following informalities: The Applicant has written one of the limitations in this claim as, "a strobe installed on the pedestal and *being capable of tug along* with the pedestal for providing a light source necessary for the digital image capturing apparatus." The placement of the phrase "being capable of *tug along*" is not grammatically

Art Unit: 2612

correct. In order to properly consider claim 7, the Examiner will read the phrase of that limitation as “being capable of *turned* along”. Appropriate correction is required.

5. **Claim 21** is objected to because of the following informalities: The last limitation of this claim, “an image generating module...according to the lit sensed by the photosensor.” The word “lit” should be “light”. Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. **Claims 1, 12-13, 21, and 22** are rejected under 35 U.S.C. 102(e) as being anticipated by Saari et al. (U.S. Pat. 6,532,035).

For **claim 1**, Saari discloses (figs. 1-3 and 5) a digital image capturing apparatus (10) comprising:

a housing (12)/(col. 4, lines 21-24);

a first hole (38) installed on the front side of the housing for inputting light from the front; (col. 4, lines 46-49)

a second hole (50) installed on the rear side of the housing for inputting light from the rear (col. 5, lines 38-41);

Art Unit: 2612

a reflector module (116) installed in the housing for reflecting the light input from the first hole or the second hole (col. 6, lines 10-18);

a photosensor (fig. 10, ref. 72) installed in the housing for sensing the light from the reflector module (col. 7, lines 22-27); and

an image generating module (inherently) installed in the housing for generating an image according to the light sensed by the photosensor (col. 5, lines 27-34 and 40-47). Saari inherently teaches an image generating module installed in the housing because in photography mode a captured image can be displayed on the screen (fig. 1, ref. 16).

For **claim 12**, Saari inherently discloses a digital image capturing apparatus wherein both the first hole and the second hole are installed with at transparent material (col. 4, lines 47-64). Saari teaches that a close-up lens (36), mounted within the recess (38), is made of transparent plastic. He also teaches that other parts of the terminal are made of this material (col. 4, lines 59-64).

For **claim 13**, Saari discloses a digital image capturing apparatus (fig. 1, ref. 10) being a *digital camera** or a digital camcorder. Saari teaches that the mobile communication terminal (10) has a photography mode, which allows the terminal to serve as a digital camera (col. 5, lines 35-47).

***Note:** The U.S. Patent and Trademark Office considers Applicant's "or" language to be anticipated by any reference containing one of the subsequent corresponding elements.

For **claim 21**, Saari discloses (figs. 1-3 and 5) a digital image capturing apparatus (10) capable of capturing images from different directions (col. 5, lines 49-67) comprising:

a housing (12)/(col. 4, lines 21-24);

Art Unit: 2612

at least one hole (38/50) installed in the housing for inputting light (col. 4, lines 46-49; col. 5, lines 38-41);

a reflector module (116) installed in the housing for reflecting the light input from the hole (col. 6, lines 10-18);

a photosensor (fig. 10, ref. 72) installed in the housing for sensing the light from the reflector module (col. 7, lines 22-27); and

an image generating module (inherently) installed in the housing for generating an image according to the light sensed by the photosensor (col. 5, lines 27-34 and 40-47). Saari inherently teaches an image generating module installed in the housing because in photography mode a captured image can be displayed on the screen (fig. 1, ref. 16).

For **claim 22**, Saari discloses a digital image capturing apparatus wherein the hole is installed with a transparent material (col. 4, lines 59-64).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 2-3, 14-18, and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Saari et al. (U.S. Pat. 6,532,035) in view of Motta et al. (U.S. Pat. 6,809,772).

For **claim 2**, Saari discloses a digital image capturing apparatus further comprising (fig. 10) a lens (70) installed between the reflector module (84) and the photosensor (72) for focusing

Art Unit: 2612

the light from the reflector module onto the photosensor (col. 7, lines 22-36). However, he does not disclose a lens group installed between the reflector module (42) and the photosensor for focusing the light from the reflector module onto the photosensor.

In a similar field of endeavor, Motta discloses a digital image capturing apparatus (fig. 3, ref. 20) further comprising a lens group (25/26) (fig. 3; col. 3, lines 42-57). In light of the teaching of Motta, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Saari's digital image capturing apparatus by substituting the lens for a lens group, which provides a user with an adjustable focus option for producing clear sharp digital images (Motta, col. 3, lines 59-66).

For **claim 3**, Saari discloses a digital image capturing apparatus further comprising (figs. 5/10) a first lens (fig. 10, ref. 70) installed between the first hole (fig. 5, ref. 124) and the reflector module (fig. 10, ref. 84) for focusing the light from the first hole onto the photosensor (fig. 10, ref. 72), and a second lens (fig. 10, ref. 76) installed between the second hole (fig. 5, ref. 108) and the reflector module (fig. 10, ref. 84) for focusing the light from the second hole onto the photosensor (fig. 10, ref. 72). Please read col. 6, lines 8-24 and (col. 7, lines 22-36). Saari does not expressly disclose a first lens group installed between the first hole and the reflector module for focusing the light from the first hole onto the photosensor, and a second lens group installed between the second hole and the reflector module for focusing the light from the second hole onto the photosensor.

In a similar field of endeavor, Motta discloses a digital image capturing apparatus (fig. 3, ref. 20) further comprising a lens group (25/26) (fig. 3; col. 3, lines 42-57). In light of the teaching of Motta, it would have been obvious to one of ordinary skill in the art at the time the

Art Unit: 2612

invention was made to modify Saari's digital image capturing apparatus by substituting the lens for a lens group, which provides a user with an adjustable focus option for producing clear sharp digital images (Motta, col. 3, lines 59-66).

For **claim 14**, Saari discloses (figs. 1-3 and 5) a digital image capturing apparatus (10) comprising:

a housing (12)/(col. 4, lines 21-24);

a lens (36) installed on the housing for inputting light *from the front** (col. 4, lines 47-64) or from the rear of the housing;

a reflector module (116) installed in the housing for reflecting the light input from the lens (col. 6, lines 10-18);

a photosensor (fig. 10, ref. 72) installed in the housing for sensing the light from the reflector module (col. 7, lines 22-27); and

an image generating module installed in the housing for generating an image according to the light sensed by the photosensor. (col. 5, lines 27-34 and 40-47). Saari teaches an image generating module installed in the housing because in photography mode a captured image can be displayed on the screen (fig. 1, ref. 16).

However, Saari does not disclose a lens being capable of moving back and forth. In a similar field of endeavor, Motta discloses a lens (25/26) installed on the housing, being capable of moving back and forth, for inputting light *from the front** (fig. 3; col. 3, lines 42-57) or from the rear of the housing. In light of the teaching of Motta, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Saari's digital image capturing apparatus with a lens being capable of moving back and forth in order to provide a user

Art Unit: 2612

with an adjustable focus option for producing clear sharp digital images (Motta, col. 3, lines 59-66).

***Note:** The U.S. Patent and Trademark Office considers Applicant's "or" language to be anticipated by any reference containing one of the subsequent corresponding elements.

Regarding **claim 15**, this claim is an apparatus claim corresponding to apparatus claim 2. Therefore, apparatus claim 15 is analyzed and rejected as previously discussed with respect to claim 2.

For **claim 16**, Saari, as modified by Motta, discloses a digital image capturing apparatus wherein the reflector module is installed in the housing. However, he does not expressly disclose a digital image capturing apparatus wherein the reflector module is capable of moving along with the lens. Official Notice is taken in that it is well known in the art for a reflector module, in a digital image capturing apparatus, to be capable of moving along with the lens. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Saari's digital image capturing apparatus with a reflector module that is capable of moving along with the lens to ensure that the image light can enter the image pickup element perpendicularly.

For **claim 17**, Saari, modified by Motta, discloses a digital image capturing apparatus, wherein the reflector module (Saari, fig. 10) comprises:

- a pedestal turning (Saari, fig. 10, ref. 86) on a second axis (Saari, col. 7, lines 22-27);
- a reflector (Saari, fig. 10, ref. 84) installed on a side of the pedestal for reflecting the light from the lens to the photosensor (Saari, col. 7, lines 22-27 and fig. 5).

Art Unit: 2612

However, Saari and Motta do not disclose a strobe installed on the pedestal and being capable of turned along with the pedestal for providing a light source necessary for the digital image capturing apparatus. Examiner takes Official Notice that it is well known in the art to install a strobe on the pedestal and being capable of turned along with the pedestal for providing a light source necessary for the digital image capturing apparatus. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Saari's digital image capturing apparatus, as modified by Motta, with a strobe installed on a pedestal and with the capability of turning the strobe along with the pedestal for providing a light source necessary for the digital image capturing apparatus in order to provide adequate projection of the image into the camera (photosensor).

For **claim 18**, Saari, as modified by Motta, teaches that the flat mirror (Saari, reflector) is pivoted to fold or bend the optical path as illustrated by the dash line in fig. 10 (Saari, col. 7, lines 28-30). As shown in Saari, fig. 10, the projection of the image (74) creates a right triangle with the mirror, which is traced out by the dotted lines. However, Saari does not expressly disclose a digital image capturing apparatus, wherein the acute angle formed by the fourth axis and the normal line of the reflector is 45 degrees. Examiner takes Official Notice that is well known in the art for the acute angle formed by the second axis and the normal line of the reflector is 45 degrees. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Saari's digital image capturing apparatus, as modified by Motta, with an acute angle formed by the second axis and the normal line of the reflector is 45 degrees in order to adequately focus the image signals into the image sensor via the lens.

Art Unit: 2612

For **claim 20**, Saari as modified by Motta, discloses a digital image capturing apparatus (Saari, fig. 1, ref. 10) being *a digital camera** or a digital camcorder. Saari teaches that the mobile communication terminal (10) has a photography mode, which allows the terminal to serve as a digital camera (col. 5, lines 35-47).

***Note:** The U.S. Patent and Trademark Office considers Applicant's "or" language to be anticipated by any reference containing one of the subsequent corresponding elements.

10. **Claims 7-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Saari et al. (U.S. Pat. 6,532,035) in view of Belliveau (U.S. Pat. App. Pub. 2004/0114043).

For **claim 7**, Saari discloses digital image capturing apparatus wherein the reflector module (fig. 10) comprises:

a pedestal turning (86) on a second axis (col. 7, lines 22-36);

a reflector (84) installed on a side of the pedestal for reflecting the light from the first hole or the second hole to the photosensor (col. 7, lines 22-36 and fig. 5).

However, Saari does not disclose a strobe installed on the pedestal and being capable of turned along with the pedestal for providing a light source necessary for the digital image capturing apparatus. In a similar field of endeavor, Belliveau discloses a digital image capturing apparatus wherein the reflector module (figs. 3/5, ref. 230) comprises: a strobe (345) installed on a pedestal (225) and being capable of turned along with the pedestal (pg. 3, pgph. 33) for providing a light source necessary for the digital image capturing apparatus (pg. 4, pgph. 39). In light of the teaching of Belliveau, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Saari's digital image capturing apparatus with a

Art Unit: 2612

strobe installed on a pedestal in order to provide adequate projection of the image into the camera (photosensor) (Belliveau, pg. 3, pgph. 33).

***Note:** The U.S. Patent and Trademark Office considers Applicant's "or" language to be anticipated by any reference containing one of the subsequent corresponding elements.

For **claim 8**, Saari, as modified by Belliveau, teaches that the flat mirror (Saari, reflector) is pivoted to fold or bend the optical path as illustrated by the dash line in fig. 10 (Saari, col. 7, lines 28-30). As shown in Saari, fig. 10, the projection of the image (74) creates a right triangle with the mirror, which is traced out by the dotted lines. However, Saari does not expressly disclose a digital image capturing apparatus wherein the acute angle formed by the second axis and the normal line of the reflector is 45 degrees. Examiner takes Official Notice that is well known in the art for the acute angle formed by the second axis and the normal line of the reflector is 45 degrees. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Saari's digital image capturing apparatus, as modified by Belliveau, with an acute angle formed by the second axis and the normal line of the reflector is 45 degrees in order to adequately focus the image signals into the image sensor via the lens.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- | | |
|-----------------------------|--|
| Ikari et al. (5,389,966) | An imaging apparatus with a mirror, which moves along with a lens. |
| Hamamura et al. (6,700,617) | A mirror positioned at a pivotal end and an opposite end |

located near a lens so as to be inclined by 45 degrees to the light axis.

Sato et al. (US Pub. 2004/0040633) Portable terminal device with a camera on side A and a camera on side B.

McCall et al. (6,002,430) One camera captures images produced by two lenses (fig. 6B).

Miranda et al. (5,619,253) Mirror oriented at a 45 degree angle relative to the optical axis of a camera lens.

Petralia (5,345,260) A video transfer device with a strobe installed on the base and being capable of turned along with the base.

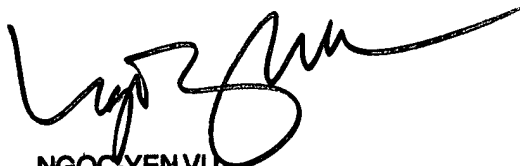
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carramah J. Quiett whose telephone number is (571) 272-7316. The examiner can normally be reached on 8:00-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2612

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CJQ
May 16, 2005



NGOC-YEN VU
PRIMARY EXAMINER